

## **DATA SENSING CIRCUITS AND METHODS FOR MAGNETIC MEMORY DEVICES**

### **ABSTRACT OF THE DISCLOSURE**

Data sensing circuits for a magnetic memory cell include a current source circuit that selectively supplies a current to the magnetic memory cell. A first storage  
5 device selectively coupled to the magnetic memory cell stores a voltage representing a state of the magnetic memory cell. A second storage device selectively coupled to the magnetic memory cell stores a voltage representing a state of the magnetic memory cell. A differential voltage sense circuit coupled to the first and second storage device that is configured to generate a sensed data output signal for the magnetic memory cell  
10 responsive to sensing a difference between voltages stored in the first and second storage devices. A control circuit generates control signals to control the current source to supply current to the magnetic memory cell and to control the coupling of the first and second storage devices to the magnetic memory cell. Magnetic memories and methods are also provided.

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